

1 ABSTRACT OF THE DISCLOSURE

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3 Methods and apparatus for supporting multiple UTOPIA bus
4 masters on a single UTOPIA bus include coupling two UTOPIA bus
5 masters via three signal lines (Ready, Request, and Grant),
6 designating one of the masters a primary master and the other a
7 secondary master, and coupling both bus masters to the same UTOPIA
8 bus. When receiving cells from the UTOPIA bus, both masters
9 accept cells and screen them (with a lookup table) to determine
10 which cells are addressed to them. When transmitting cells, the
11 primary master normally controls polling and PHY selection. The
12 secondary master asserts the Request line during polling to
13 indicate that it has a cell to send to a PHY that has responded
14 positively to the polling. In response to the Request signal, the
15 primary master asserts the Grant line and control of the bus is
16 given to the secondary master for the next cell cycle. The
17 presently preferred embodiment utilizes an arbitration scheme to
18 assure fairness in allocating control of the bus.